



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,035	11/14/2003	Michael Lau	245484US41X DIV	7517

22850 7590 05/12/2005

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

SUKMAN, GABRIEL S

ART UNIT	PAPER NUMBER
----------	--------------

3641

DATE MAILED: 05/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/712,035

Applicant(s)

LAU ET AL.

Examiner

Gabriel S. Sukman

Art Unit

3641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/6/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In each of the independent claims, Applicant recites a method that is incapable of being performed by the disclosed structure and is thus not enabled. Further, one of ordinary skill in the art would not understand exactly how one is to go about following the claimed method because there is no clear necessary modification or direction to follow in view of the disclosed apparatus.

In claims 1 and 6, it is explicitly claimed that the bin moves linearly and, subsequently, rotatingly. Claim 7 does not recite the linear motion but involves two distinct motions – the first motion in which protrusions follow the first and second grooves *until the second protrusion contacts an end portion of the second groove* and a second motion *about the second protrusion* until the *first protrusion contacts an end of the first groove*. The following discussion outlines the examiner's understanding of how

Art Unit: 3641

the applicant believes the invention to work and the reasons why this operation fails to enable that which is claimed.

The First Motion:

The Applicant discloses and claims that the opening process of the bin comprises two distinct motions – a linear motion followed by a pivoting motion. This first linear motion is taught to be guided by the linear guide tracks (14, 14') located on the bin support structure and corresponding with a roller (15, 15') located on the bin. However, this first motion is simultaneously taught to be guided by the arcuate grooves (6, 7) cut into the bin and corresponding to the guide bolts (8, 9) located on the support structure. Applicant teaches that these grooves (6, 7) "extend[] along a circular arc about a common arc center point M" (page 9, lines 14-15 of specification). Figure 4 shows the location of this common center point, M. The specification does not teach any other possible configuration for these grooves and does not suggest that they may be altered in any way. Further, the contour of each of the grooves is not taught to vary in any way; the only description is that both of their center points lie at point M.

It is contended by the examiner that the bin as disclosed cannot simultaneously follow the path set by the grooves (6, 7) as well as that set by the guide track (14) and that if any motion were to occur (i.e., if the guide track were removed), it would not be linear. As to the former contention, it is recognized that if any motion were to occur along the grooves (6, 7), it would require a constant and uniform rotation of the bin

Art Unit: 3641

about the point M and, consequently, every point on the bin must move along a curve that has the point M as its center point, the same as the grooves (6, 7). This being so, the point at which the roller pin (15) is located must therefore also move along a curve with its center at M and therefore would necessarily cause binding if only allowed to move along the linear track (14).

The fundamental basis for this assertion, which is that the bin must uniformly rotate about the point M, can be proven by geometry. The underlying limitation is that the bolts (8, 9) are at a constant distance apart. As such, any movement of the bin causing a shift in location of one of the bolts necessarily causes a shift in location of the other bolt through an *equal angular distance* and the bolts will *always be colinear* with each other and the center point of rotation, M. To prove this point, one must only consider the possible locations of one of the bolts when an arbitrary location for the other is chosen. For example, if one considers the arrangement as depicted in figure 4, it is clear that if the bolt 9 is at the bottom of the track 7 then the bolt 8 must also be at the bottom of the track 6. If one attempted to rotate the bin so as to keep the bolt 9 in the same place but move bolt 8 along track 6, it would soon be recognized that this is impossible because the attempted rotation requires a pivot about point 9 but the groove 6 is cut out to only allow a pivot about point M. The groove that would be necessary to effectuate such a rotation about point 9 would have to be a curve with a smaller radius, that is, a radius equal to the distance between bolts 8 and 9. Extending this concept to the range of possible locations for the bolt 9, it is clear that whatever angular distance bolt 9 is from the bottom of track 7 (denoted as α in figure 4), bolt 8 must be an equal

Art Unit: 3641

angular distance from the bottom of track 6 because that is the only location on track 6 that maintains the constant distance between the bolts. Thus, the bin would move in *uniform pure rotation* about the point M if the linear guide track 15 were not present and therefore the track cannot be present and allow for simultaneous motion along it and the grooves 6 and 7.

Therefore, the limitations in claims 1 and 6 that require a first linear motion of the bin are not enabled.

The Second Motion:

The applicant relies on the teaching of groove 6 having a larger arc angle (α_2 ; see page 11, line 17 through page 12, line 6) than groove 7 (α_1) to allow a second, pivoting, motion of the bin that would drop the front side of the bin lower than the rear. This pivoting motion is taught to occur after the bolt 9 reaches the top end of the groove 7 and “*about the rear guide bolt[] 9*” (page 12, lines 7-17; see also page 13, lines 14-20). However, the applicant does not disclose anything other than a constant curvature and constant center point being point M for the curve made by the groove 6.

The examiner appreciates that the arc angle of groove 6 is larger than that of groove 7 and therefore agrees with the assertion that once bolt 9 reaches the upper end of the groove 7, the bolt 8 will not yet have reached the end of groove 6 (this is all assuming the nonexistence of guide track 15 which absence, as an aside, has little or no support in the specification). Indeed, in accordance with the discussion above, the

Art Unit: 3641

bolt 8 will in fact be at a location along groove 6 so as to form a straight line between the three points comprising itself, bolt 9, and center point M. But the problem with the disclosure is that, similarly to the discussion above, the bolt 8 will not be able to continue its path along groove 6 because the bin is now rotating about the stationary bolt 9, and not point M, thus requiring a groove having a smaller radius than groove 6 is disclosed as having. In order for the bin to successfully pivot *about the bolt 9* when bolt 9 is at the end of groove 7, the groove 6 must have a radius equal to the (constant) distance between bolts 8 and 9 or, in other words, must have the bolt 9 as the center point of the curve. Since the entirety of the groove 6 has a center point at point M, any further movement after the bolt 9 has reached the top of groove 7 would result in bolt 8 binding against the inner edge of the groove 6 and will therefore be unable to ever reach the end of groove 6 as disclosed.

In view of this, the examiner contends that the configuration depicted in figure 5 of the application is an impossibility and is therefore misleading. The problem is that the bolts 8 and 9 simply cannot occupy the positions shown in figure 5 if figure 4 is correct. This can be verified on each of the figures (the figures are not drawn to scale relative to each other but each figure in itself appears to be to scale in that the grooves are actually drawn accurately, with their center points at point M; it is noted that the examiner is not relying on a manual measurement of the figures for this argument, but on geometry, and that the manual measurement of the figures merely provides some visualization that may aid in understanding). If one were to measure the distance between the bolts in figure 4 and then compare that distance to the distance that would

be between the bolts if they were both at the top of each of the grooves in the same figure, one would notice that the latter distance is noticeably greater than the former. In figure 5, one would notice that the distance between the depicted bolts is greater than the distance that would be between them if they were both at the starting positions, that is, at the bottom of each of grooves 6 and 7. Since the distance between the bolts must be constant, it has therefore been shown that the bolts 8 and 9 cannot both be at the top of the grooves 6 and 7 (as in figure 5) if they were, at some point, both at the bottom of the grooves (as in figure 4). If the Applicant had attempted to draw figures 4 and 5 to the same scale, they would have realized that the configuration of figure 5 was impossible.

Therefore, due to the fact that the grooves 6 and 7 are taught to be curves having a common constant midpoint throughout their length, it is contended by the examiner that the second motion put forth by the applicant wherein the bin tilts further forward after bolt 9 has reached the top of the groove 7 has not been enabled because such rotation requires a groove having a different curve from that disclosed.

In addition to being nonenabled due to the first motion as discussed above, claims 1 and 6 accordingly lack enablement for the claimed second motion as well in view of the immediately preceding discussion. Claim 7 is also rejected for lack of enablement of the second motion because the claim explicitly recites that the rotation occurs "about the second protrusion [corresponding to bolt 9 of the disclosure] until the first protrusion contacts an end of the first groove." The disclosed apparatus has been

Art Unit: 3641

shown to lack the ability to accomplish this feat and the claim limitation therefore lacks enablement.

Claims 2-5 and 8-15 are likewise rejected for lacking enablement because they are dependent upon claims 1 and 7.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 4,275,942 to Steidl

U.S. Patent No. 5,244,269 to Harriehausen et al.

U.S. Patent No. 5,567,028 to Lutovsky et al.

U.S. Patent No. 5,839,694 to Bargull et al.

U.S. Patent No. 4,368,937 to Palombo et al.

U.S. Patent No. 5,934,615 to Treichler et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gabriel S. Sukman whose telephone number is (703) 308-8508. The examiner can normally be reached on M-F, 8:30-6:00, every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J. Carone can be reached on (703) 306-4198. The fax phone

Art Unit: 3641

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gss


MICHAEL J. CANNON
SUPERVISORY PATENT EXAMINER